

REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claim 1 so as to clarify the subject matter of the pending rejection. No new matter has been added.

For the reasons set forth below, it is respectfully submitted that all pending claims are patentable over the cited prior art.

Applicants once again acknowledge with appreciation the indication of allowance of claims 10-12 and 31-35.

II. The Rejection Of The Claims Under 35 U.S.C. § 102

Claims 1, 4, 6, 7 and 9 were rejected under 35 U.S.C. § 102 as being anticipated by USP No. 4,979,076 to DiBugnara. Applicants respectfully submit that, as amended, the foregoing pending claims are clearly not anticipated by DiBugnara.

As recited by amended claim 1, it is clarified that the plurality of penetration holes form an NxM matrix of aligned holes and aligned columns, where N and M are greater than or equal to three. As agreed upon during a telephone interview conducted with Examiner Dinh on September 22, 2003, the foregoing amendment would distinguish the present invention over DiBugnara.

With regard to DiBugnara, it is again noted that the reference does not disclose a matrix wherein each penetration hole is contained in at least one row and one column of the matrix, and each row and each column of the matrix includes at least two penetration holes, where the matrix has at least three rows and three columns.

Accordingly, as anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single

prior art reference, *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and, at a minimum, DiBugnara does not disclose the foregoing limitation, it is clear that DiBugnara does not anticipate amended claim 1, or any claim dependent thereon.

III. The Rejection Of Claim 8 Under 35 U.S.C. § 103

Claim 8 was again rejected under 35 U.S.C. § 103 as being anticipated by USP No. 4,979,076 to DiBugnara in view of USP No. 5,875,100 to Yamashita. Applicants respectfully submit that, for at least the following reasons, claim 8 is patentable over DiBugnara and Yamashita taken alone or in combination with one another.

As recited by pending claim 8, the present invention relates to a module component comprising in-part: a chip component disposed in a penetration hole, where the chip component has a height which is greater than the depth of the penetration hole, but which does not result in the component projecting from the first and second auxiliary substrates, which are formed on the surfaces of the substrate in which the penetration hole is formed. Moreover, the claim further recites that the chip component electrically couples circuit wiring disposed on both sides of the substrate. As such, it is necessary for the chip component to extend through the entire substrate, or it would not be able to coupling wiring disposed on both sides of the substrate.

Turning to the cited prior art, in the pending rejection, it is admitted that DiBugnara does not disclose a chip component having a height greater than the depth of the penetration hole. Yamashita is relied upon as curing this deficiency. It is respectfully submitted that this conclusion is incorrect for at least the following reasons.

First, it is again noted that the penetration hole disclosed in Yamashita, which is identified by reference numeral 21 in Fig. 1A and which functions to receive the component 10, does not extend through the entire substrate as recited by the pending claim so as to allow the

chip component disposed in the penetration hole to contact circuit wiring disposed on both sides of the substrate. As is clear from the figures of Yamashita, the penetration hole 21 only extends halfway through the substrate. However, the penetration hole of DiBugnara must extend through the entire substrate as shown in Fig. 1 of DiBugnara. Thus, the proposed modification of DiBugnara, which would require the use of the hole 21 of Yamashita, would effectively destroy the intended functionality of DiBugnara, and is therefore improper.

Moreover, based on the fact that the penetration of Yamashita only extends halfway through the substrate, there is simply no motivation to modify DiBugnara with Yamashita as suggested in the pending rejection. As is well known, there must be objective evidence supporting the proposed modification. It is improper to simply pick and choose elements from the various prior art references. It is respectfully submitted that there is simply no motivation to make the proposed modification.

Second, as shown in Fig. 3 of DiBugnara, the auxiliary substrates 51 and 61 are placed directed above the chip component 41. Thus, it does not appear to be possible to modify the device of DiBugnara such that the chip component has a height larger than the penetration hole such that it extends into the planes defined by the auxiliary substrates because, as stated, the auxiliary substrates are formed directly on top of the chip component. Thus, for this additional reason, the proposed modification of DiBugnara as set forth in the pending rejection would defeat the intended functionality of DiBugnara.

As is well known, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, there is no suggestion or motivation to make the proposed modification (*see*, M.P.E.P. § 2143.01).

Accordingly, for at least the foregoing reasons, it is respectfully submitted that the pending rejection based on the combination of DiBugnara and Yamashita is improper and should be withdrawn.

**IV. All Dependent Claims Are Allowable Because
The Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

V. Request For Notice Of Allowance

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, an additional petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT, WILL & EMERY

By: 

Michael E. Fogarty

Registration No. 36,139

600 13th Street, N.W. , Suite 1200
Washington, D.C. 20005-3096
Telephone: 202-756-8000
Facsimile: 202-756-8087 MEF:men
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